REMARKS/ARGUMENTS

Examiner's ruling with respect to the restriction of claims has been duly noted. Accordingly, claims 35-38 have been canceled. A divisional application will be filed at the appropriate time.

Reconsideration is requested of all rejections based on 35 U.S.C. 102:

In rejecting all claims under 35 USC 102 examiner has relied on Hasegawa et al. (U.S. 6,643,107).

As examiner knows, a rejection based on 35 USC 102 must teach ALL features that appear in the rejected claims. With respect, we point out that the following features of the present invention are not taught by Hasegawa:

(1) A MASK THAT IS NOT NOTCHED BUT HAS UNIFORM WIDTH. While this is not explicitly stated in the claims it is not necessary to do so since a mask with a uniform width and no notch is the norm. This may be assumed unless further characterization of the mask is explicitly provided. Furthermore, all drawings that accompany the present invention show a mask that is not notched and that has uniform width.

Hasegawa's invention teaches the use of a notched mask throughout and relies on its properties for the proper functioning of his invention.

(2) THE PRESENT INVENTION MAY BE IMPLEMENTED USING A HARD MASK INSTEAD OF PHOTORESIST. See, for example, claim 27. Formation of Hasgawa's notched mask from a material other than photoresist would be both difficult and expensive. This feature is particularly important as it allows the same mask to be used while the ion beam characteristics are being optimized.

(3) NO MORE THAN 180° SWEEP OF THE ION BEAM RELATIVE TO THE STACK AT ANY GIVEN TIME. Hasegawa teaches continuous 360° rotation of the beam relative to the stack.

(4) FORMING BOTH THE UPPER AND LOWER PEDESTALS IN A SINGLE OPERATION, STARTING FROM A LAMINATED SHEET. Hasegawa first forms a single pedestal in a separate operation and then divides it into upper and lower portions.

(5) VARYING THE SHAPES OF THE UPPER AND LOWER PEDESTALS WITHOUT LOSS OF ALIGNMENT. The present invention achieves this by varying the angl(es) through which the stack is swept during IBE.

(6) THE ANGLE OF THE ION BEAM CHANGES AS IT IS SWEPT ROUND. This feature provides another degree of freedom for controlling the shapes and dimensions of the final pedestals. Examiner states that Hasegawa teaches first and second beam angles in col. 28 lines 49 to 55. Examiner appears to have given us the wrong reference here as the paragraph in question relates to directions of magnetization in the finished product, not to angles for ion beams. Nor do figures 2, 3 and 5 provide any information that could be interpreted as teaching that the angle of the ion beam changes as it sweeps around the stack.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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By 

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